INSECTICIDE CONTROL ON POULTRY - 2019

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This publication contains only a portion of the important information included on pesticide labels. Always read the product label carefully before buying and using any pesticide. Also, pesticide labels and registrations may change at any time. Any statements in this publication that disagree with the label must be disregarded. Many insecticides are sold under brand names that are not listed in this publication. No endorsement is intended for products mentioned, nor is criticism meant for products not listed.

Insecticides have been placed into numbered Insecticide Mode of Action groups (MOA) based on how they work against insects. Continual use of products from a single group against a pest species can lead to reduced control (resistance) by all products in the group. To minimize control failures due to insecticide resistance, do not apply insecticides within the same group repeatedly, even when using different application methods (baits, residual sprays, knockdown sprays, etc.). Rotate among groups.

Fly Control in Poultry Operations

Effective sanitation and manure management programs are essential to maintaining fly populations at low levels. Manure, spilled feed, and wet bedding should be removed weekly in order to interrupt the fly breeding cycle. Insecticides will provide only temporary relief unless breeding sites are eliminated.

Moisture control is essential to ensure that manure accumulations dry rapidly. Proper ventilation, temperature control, cutting of grass and weeds around buildings and use of fans to increase air movement over droppings will enhance drying. Repair leaky waterers, cull birds that habitually produce very loose manure, remove broken eggs and dead birds and reduce feed spillage to improve fly control. Proper screening of doors and windows will reduce fly numbers egg rooms and offices. Air curtains and properly positioned fly electrocuter traps are also useful in preventing flies from entering buildings.

Contact sprays, fogs or space sprays

Contact sprays, fogs, or spaces sprays provide rapid but short-term control of flies. They are best used when fly outbreaks must be reduced quickly. Repeat them as needed. Do not contaminate feed or water. Usually, the birds may be present during application but should not be sprayed directly.

Active Ingredient	MOA Group	Brand Names
Dichlorvos	1B	Vapona 40 EC
Pyrethrins + Piperonyl butoxide	3A	Pyrethrins (0.1 to 0.6%) plus Piperonyl Butoxide (1 to 6%)

Residual Fly Sprays

Insecticides may be applied as residual surface sprays, non-residual space sprays, baits, manure sprays, or feed additives. Always read and follow label instructions before applying insecticides for fly control. Treat walls, ceilings, posts, and other fly resting sites. Spray these areas thoroughly and to the point of runoff. In order to minimize control failures due to insecticide resistance, do not apply products from the same chemical class repeatedly throughout a season. Rotation among insecticide mode of action groups can reduce the potential for the development of resistance in pest populations. This is particularly important in house fly control.

Active Ingredient	MOA Group	Brand Names
Chlorpyrifos	1B	DuraShield
Stirofos	1B	Rabon 50% WP
Stirofos + Vapona	1B	Ravap EC
Bifenthrin	3A	ActiShield 7.9L
Cyfluthrin	3A	Countdown 2 EC OR 20% WP or Tempo 2E

Deltamethrin	3A	Annihilator Polyzone
gamma-Cyhalothrin	3A	StandGuard 5.9 MC
lambda-Cyhalothrin	3A	Grenade 10% WP
Permethrin	3A	Atroban, Gardstar, 10% Prozap Insectrin, Permectrin II 10% or 25% WP
Spinosad	5	Elector PSP (44.2%)

Do not contaminate food, water or utensils with spray and do not treat animals directly. One gallon of spray treats 500-1,000 square feet, depending on the type of surface (See label directions). Apply to walls, ceilings and other fly resting sites. Residual fly spray materials listed above provide control for 1-7 weeks.

Fly baits

Baits can be scattered where house flies congregate to provide some temporary reduction in numbers. Never use baits where birds or other domestic animals can eat them. Place baits in areas where flies congregate, such as window sills or doorways. Baits alone will not control fly populations. They should be used along with sanitation and other insecticidal methods (e.g., residual and space sprays).

Bait Active Ingredient	MOA Group	Brand Names*
Methomyl	1A	Apache, Fatal Attraction, Golden Malrin Fly Bait Plus, Tailspin
Trichlorfon	1B	Dipterex
Dinetofuran	4	QuickStrike 1% Strip
Imidacloprid	4	QuickBayt 0.5%
Spinosad	5	Elector Bait 0.5%
Cyantraniliprole	28	Zyrox Fly Granular Bait

Manure sprays

These sprays kill developing fly larvae. They are recommended where manure cannot be removed often enough to provide substantial fly control. Apply at a rate of approximately 1 gal of diluted spray/100 sq. ft. to kill maggots. Do not spread treated manure onto crops not listed on the insecticide label. Apply sprays at rates that wet the manure surface, it is not necessary to soak the manure. Repeat treatments as necessary but no more often than every 7 days.

Active Ingredient	MOA Group	Brand Names
Tetrachlorvinphos	1B	Rabon 50% WP, Rabon 24% EC
Tetrachlorvinphos + Vapona	1B	Ravap 28.7% EC
Cyromazine	7	Larvadex 5% SC

Larvicides and Feed through Treatments

Use larvicides strictly according to the label. Insure that there is thorough but not excessive coverage and penetration of droppings to achieve control. Larvicides are designed to be used in caged bird houses only. Larvadex Premix (cyromazine) can be used as a feed through larvicide on for caged layer hens. Use at 1 pound per ton of feed for house fly control.

Fly Parasite Release Programs

Several companies offer fly parasite release programs that can be used to supplement fly control around concentrated poultry operations. The benefits of parasite release programs in livestock operations have not yet been proven. Several parasite species are available. *Spalangia nigroaenea* attacks house flies and stable flies in feedlots. Parasites in the genus *Muscidifurax* attack house flies while those in the genus *Spalangia* attack stable flies. Do not buy blends of unknown species and do not buy shipments of *Nasonia vitripennis*, a species that has been ineffective in Midwestern feed lots. See ENTFACT 502- "Biological Control of Flies".

Mites

Northern fowl mites are the most serious external parasites of poultry. Large numbers of these blood feeding mites can buildup on birds in just a few weeks, especially during cool weather. Northern fowl mites settle around the vent of the bird and the area can become matted and black. Treat the infested area thoroughly with an insecticide for best control. A second application, about 10 days after the first one, is advised. The mites can live off the birds for about 3 weeks so they may survive in houses that are temporarily empty.

Red poultry mites feed on blood at night and hide in cracks and crevices in poultry houses during the day. Control requires treating cracks and crevices in the house as well as treating the birds. Red mites can survive for several months without the host.

Lice and Mites (Bird Treatments)

Active Ingredient	MOA Group	Brand Names
Tetrachlorvinphos	1B	Rabon 50% WP or Rabon 3% D
Tetrachlorvinphos + Dichlorvos	1B	Ravap EC
Permethrin	3A	Permectrin II 10% EC
Spinosad	5	Elector PSP

Lice, Chicken Mites and Northern Fowl Mites (Poultry House and Litter Treatments)

Active Ingredient	MOA Group	Brand Names	Comments
Tetrachlorvinphos	1B	Rabon 50% WP	Do not treat more than every 14 days. Treat litter thoroughly. 0 days to slaughter.
Tetrachlorvinphos	1B	Rabon 3%D	Do not treat more than once every 4 weeks. Treat litter thoroughly. 0 days to slaughter.

* Do not apply dust to eggs or nests. Do not treat more than once every 4 weeks.

Note: Poultry house and litter treatments should be applied thoroughly to litter, walls, floors, roosts, and similar areas where pests hide. Force sprays into all cracks and crevices.

Lesser mealworms (litter beetles)

Active Ingredient	MOA Group	Brand Names
Chlorpyrifos	1B	Duratrol Darkling Beetle Spray, DuraShield
Tetrachlorvinphos	1B	Rabon 50 WP
Tetrachlorvinphos + Dichlorvos	1B	Ravap EC
Bifenthrin	3A	Actishield, Nemesis, Talstar
Cyfluthrin	3A	Optashield, Tempo 20 WP
lambda-cyhalothrin	3A	Stanguard Grenade, Demand
Permethrin	3A	Tengard
Imidacloprid	4A	Credo SC
Spinosad	5	Elector PSP
Pyriproxyfen	7	Archer IGR, Nygard, Pyri-Shield

Most labels require removing birds before treatment. Do not contaminate water or feed when treating.

The darkling beetle adults and larvae can be found in floor litter where they feed on poultry feed, dried bird droppings, and bird carcasses. In addition, they may chew into insulation or wooden support beams, and are a potential disease reservoir. They are one of the best-adapted scavenger insects associated with both litter-based broiler operations and egg houses with deep-pit manure management systems. Wall sprays can reduce numbers of adults.

Bed Bugs

Occasionally, bed bugs can be a problem in poultry houses. Typically, feeders and waterers are hung over platforms made of wooden slats that provide excellent shelter for bed bugs. Also, the corners of galvanized metal nest boxes and cardboard boxes used to transport eggs are typical sites for bed bugs.

Active Ingredient	MOA Group	Brand Names
Carbaryl	1B	Sevin 80 WSP
Bifenthrin	3A	ActiShield 7.9 L
Cyfluthrin	3A	Tempo, Countdown, Optem 20 WP or 2 L
Chlorpyrifos	3A	Durashield 20 CS
gamma-cyhalothrin	3A	StandGuard 5.9 MC